

## PRODUCT DATA SHEET

# JAHN M100 - Terra Cotta & Brick (CERTIFIED INSTALLERS ONLY)

• Terra Cotta Repair • Brick Repair Mortar

This single-component, cementitious, mineral-based mortar is designed for the restoration of terra cotta and brick surfaces. Jahn M100 is completely vapor permeable and contains no latex or acrylic bonding agents or additives. M100 is specifically engineered for compatibility with oven-fired materials to provide a permanent repair, which both enhances and protects the original substrate. Only Certified Installers may purchase Jahn M100 Terra Cotta Repair Mortar. To restore the original glaze and keep water from entering the substrate through the new repair, use our **Potassium Silicate Coating** to paint the repair and our **Terra Cotta Coating Glaze** to replicate the glaze. (Call Cathedral Stone at 800-684-0901 for more information about our complete Terra Cotta Coating System).

### FEATURES AND BENEFITS

- **Single-Component:** Mixes with water only, improving quality control and consistency of application.
- **Compatible Formulations:** Compatibility of physical properties ensures that the mortar and natural substrate react to the environment in the same way.
- **Contains No Latex or Acrylic Bonding Agents:** It protects the substrate by allowing salts, water vapor, and liquid water to reach the surface, preventing failure due to salt expansion or freeze/thaw cycles.
- **Tenacious Adhesion:** Strong bonding capabilities without relying on synthetic bonding agents.
- **Factory Controlled:** No field chemistry resulting in product variation.
- **Custom Colored Upon Request:** Closely matches existing masonry. Choose from Standard or Custom Colors.

### APPLICATION PROCEDURES

#### Surface Preparation

Surfaces to receive M100 must be sound and free of all dust, dirt, grease, laitance and/or any other coating or foreign substance which may prevent proper adhesion. Remove all loose and deteriorated masonry from the repair area using manual or pneumatic cutting tools. Areas to be repaired should be cut to provide a minimum of 1/2" depth. Do not install repairs that have a feathered edge (see diagram below), incorrect installation will cause repairs to fail prematurely. Wash the prepared surface with clean water and a bristle brush to remove dust from the pores.



Section: Correct (Square Cut) Surface Preparation



Section: Incorrect (Feathered Edge) Surface Preparation

#### Exposed Ferrous Metals:

In the event that ferrous metal reinforcement (re-bar, threaded rod, etc.) is exposed within the repair area or repairs are adjacent to ferrous metal jambs, lintels, anchoring systems etc., the Coronado Surface Tolerant Mastic 113 Line must be applied to all properly prepared ferrous metal surfaces before repairs are made. Refer to the Technical Data Sheets within Cathedral Stone's Product line for proper preparation and use of the Coronado Surface Tolerant Mastic 113 Line.

### Mixing

The mixing ratio is approximately 4 1/2 to 5 parts powder to 1 part water by volume, depending on temperature and humidity. More water may be required as ambient temperature rises. The mixing may be done by hand, stirring until the mortar is thoroughly mixed. The mortar should be the consistency of stiff putty, without lumps. M100 may also be mixed using a slow speed drill (400 -600 rpm) equipped with a Jiffler-type mixing paddle. For best results, add the powder to the water slowly. The working time will vary, depending upon wind, temperature, and humidity. Using excessive water in the mixture may affect the color of the repair.

### Application

Moisten the substrate using clean water. Jahn Mortar should be applied to a glistening wet surface on vertical applications and a well-dampened surface (with no pooling water) on horizontal applications. **If the surface is allowed to dry out before applying M100, this step must be repeated. This is very important.**

The next step of the application is what CSP has termed the "Peanut Butter" coat. The Jahn mortar should be mixed with water to the consistency of wet putty. Apply the "Peanut Butter" coat to the glistening wet substrate approximately 1/8 inch thick. **Important - To achieve proper bond, the "Peanut Butter" coat must not dry out prior to application of Jahn Mortar (4.5:1) mix!**

Since the working consistency of M100 is somewhat wet, large repairs may require successive applications in order to avoid material slump. If this is necessary, be sure to remove the shiny cement skin that sometimes forms on the surface by scraping away 1/16" of material. This will open the pores before an additional layer of material is applied. Dampen surface and continue application.

Build up material beyond the surface of the substrate. The waiting period before finishing will vary, depending upon wind, temperature, and humidity. After achieving initial set, scrape away excess mortar until the desired profile is reached.

Use a MasonRE Mineral Coating along with MasonRE Terra Coat to simulate the original terra cotta glaze.

### Curing

#### Traditional Cure

Periodically mist M100 repairs using clean water for at least a 72-hour period. The timing for initial misting will vary with ambient conditions. Hot, dry conditions may require misting in 30 to 60 minutes. Cooler, damp conditions may require waiting several hours before beginning the curing process. Mist several times a day. Should access to the repairs be impossible over a period of time, plastic may be used to cover them temporarily. The application of plastic, however, does not remove the need for normal curing techniques.

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Notice: The information contained herein is based on our own research and the research of others, and it is provided solely as a service to help users. It is believed to be accurate to the best of our knowledge. However, no guarantee of its accuracy can be made, and it is not intended to serve as the basis for determining this product's suitability in any particular situation. For this reason, purchasers are responsible to make their own tests and assume all risks associated with using this product.

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**Self-Cure**

No curing is necessary when masonry surface temperature is 85°F or lower. When working on surface temperatures above 85°F, follow the Traditional Cure procedures outlined above.

**Clean Up**

Remove uncured mortar from the perimeter of the repair before it dries using clean water and a rubber sponge. Repeat several times with clean water to prevent a halo effect (staining of adjacent masonry). Cured mortar may only be removed chemically or mechanically.

**SAFETY REQUIREMENTS**

It is recommended that safety goggles, gloves, and a dust mask equipped with P-2 filters (or equivalent) be worn for protection while mixing.

**Limitations**

- Do not apply Jahn Mortar to a frozen or exceedingly hot substrate. The applied mortar must be protected from extreme heat, freezing, excessive wind, direct sunlight, and rain. Ambient temperature range should be 40° F to 90° F with low to average humidity.
- Do not add bonding agents to Jahn Mortar or use them as surface preparation materials.
- Minimum thickness of mortar application is 1/2 "

**PACKAGING AND COVERAGE**

A 5-gallon plastic pail contains approx. 44 lb. Of material. This will cover 0.5 cubic ft. (12 sq. ft. at 1/2" thickness).

**STORAGE AND SHELF LIFE**

Store material in a dry area away from direct sunlight. Ambient storage conditions should be in the range of 40°F to 90°F with low to average humidity. Average shelf life is 2 years in original, unopened packaging.

**Technical Data**

**Jahn M100**

<b>LIQUID/PLASTIC PHASE</b>	
Ratio of water/dry material	3 fl. oz. to 4.5 lb.
Volume per pound mixed mortar	12.0 fl. oz./lb
<b>HARDENED PHASE</b>	
Compressive strength	3000 to 3800 psi
Tensile bending strength	619 psi
Tensile strength	150 psi
Linear coefficient of thermal expansion	0.1E-06 to 0.3E-06 in inches °F
Modulus of elasticity	218 to 1540 ksl
Open porosity (%)	4.2 to 16.5
Specific gravity	1.3

**WARNING**

Not for internal consumption. Keep out of reach of children and animals. Consult Material Safety Data Sheet (MSDS) for specific information.

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